INTERNATIONAL SEARCH REPORT

nal Application No PCT/IB2004/051161

A. CLASSIFICATION OF SUBJECT MATTER
1PC 7 B26B21/58 B26B21/60

C23C8/80

C23C30/00

B26B19/38

B26B19/04

B26B19/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 B26B C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Υ	US 2003/096060 A1 (MCDONOUGH KEVIN P ET AL) 22 May 2003 (2003-05-22) paragraphs '0009!, '0010!, '0017! - paragraph '0026!; figures 1,2	1-3,8
Y	WD. MÜNZ: "Large-Scale Manufacturing of Nanoscale Multilayered Hard Coatings Deposited by Cathodic Arc/Unbalanced Magnetron Sputtering" 'Online! vol. 28, no. 3, March 2003 (2003-03), pages 1,173-179, XP002301638 Retrieved from the Internet: URL:http://www.mrs.org/publications/bullet in/2003/mar/> 'retrieved on 2004-10-20! abstract page 178, column 2 - column 3, paragraph 1 page 173 - page 175; figures 1-4	1-3,8

Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
 Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed 	 "T" later document published after the international filing date or priority date and not in conflict with the application but ciled to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search	Date of mailing of the international search report
20 October 2004	11/11/2004
Name and mailing address of the iSA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel.' (+31–70) 340–2040, Tx. 31 651 epo nl,	Authorized officer
Fax: (+31-70) 340-3016	Maier, M

INTERNATIONAL SEARCH REPORT

In anal Application No
PCT/IB2004/051161

0.10000		PC1/1B2004/051161
	etion) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 933 058 A (BACHE ROGER J ET AL) 12 June 1990 (1990-06-12) column 1, line 4 - column 5, line 59	1
A	EP 1 287 953 A (KAI R & D CT CO LTD) 5 March 2003 (2003-03-05) paragraph '0015! - paragraph '0036!; compounds 1-9	1-8
A	EP 0 872 569 A (PLASMA METAL S A) 21 October 1998 (1998-10-21) the whole document	1,2
Α	PATENT ABSTRACTS OF JAPAN vol. 0100, no. 04 (C-322), 9 January 1986 (1986-01-09) & JP 60 162766 A (KIYUUSHIYUU HITACHI MAKUSERU KK), 24 August 1985 (1985-08-24) abstract	1,2
Α	PATENT ABSTRACTS OF JAPAN vol. 0091, no. 19 (C-282), 23 May 1985 (1985-05-23) & JP 60 009868 A (NITSUKEN RIKI SEIZOU KK), 18 January 1985 (1985-01-18) the whole document	1
P,A	WO 2004/015159 A (DE BEURS HANS; BLAAUW HUBERT S (NL); KONINKL PHILIPS ELECTRONICS NV () 19 February 2004 (2004-02-19) the whole document	1
A	US 3 743 551 A (SANDERSON M) 3 July 1973 (1973-07-03) the whole document	

information on patent family members

Ir nal Application No
PCT/IB2004/051161

	itent document In search report		Publication date		Patent family member(s)		Publication date
UŞ	2003096060	A1	22-05-2003	US	6684513	B1	03-02-2004
				US	2003121158		03-07-2003
				AU	3870201		12-09-2001
				BR	0107309	Ä	25-02-2003
				CA		Ã1	07-09-2001
				CN	1400931		
				EG	22226	T	05-03-2003
							31-10-2002
				EP	1259361		27-11-2002
				JP	2003525098	Ţ	26-08-2003
				TW	518273	_	21-01-2003
US				WO	0164406 	A2 	07-09-2001
	4933058	Α	12-06-1990	CA	1313509		09-02-1993
				EP	0255834		17-02-1988
				WO	8704471	A1	30-07-1987
EP	1287953	Α	05-03-2003	JP	2001340672		11-12-2001
				AU	6070301	Α	17-12-2001
				EP	1287953		05-03-2003
				ŪS	2004099120		27-05-2004
				WO	0194083		13-12-2001
	0872569		21-10-1998		0070500		
LI	00/2009	A	21-10-1998	EP	0872569		21-10-1998
				AT	256761		15-01-2004
				CA	2234986		18-10-1998
				DE	69726834	D1	29-01-2004
				ES	2210480	T 3	01-07-2004
				US	5989363	Α	23-11-1999
JP	60162766	A	24-08-1985	NONE			
JP	60009868	A	18-01-1985	NONE			
WO	2004015159	A	19-02-2004	WO	2004015159	A2	19-02-2004
		Α	03-07-1973	AT	320472		10-02-1975
US	3743551					A -4	18-10-1971
US	3743551					AI	10-10-13/1
US	3743551			BE BG	765869		
US	3743551			BE BG	765869 19094	A3	30-04-1975
US	3743551			BE BG CA	765869 19094 989687	A3 A1	30-04-1975 25-05-1976
US	3743551			BE BG CA CA	765869 19094 989687 927224	A3 A1 A1	30-04-1975 25-05-1976 29-05-1973
US	3743551			BE BG CA CA CH	765869 19094 989687 927224 532987	A3 A1 A1 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973
US	3743551			BE BG CA CA CH DE	765869 19094 989687 927224 532987 2118211	A3 A1 A1 A A1	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971
US	3743551			BE BG CA CH DE DE	765869 19094 989687 927224 532987 2118211 2118212	A3 A1 A1 A A1 A1	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971
US	3743551			BE BG CA CH DE DE ES	765869 19094 989687 927224 532987 2118211 2118212 196198	A3 A1 A1 A A1 U	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980
US	3743551			BE BG CA CH DE DE FI	765869 19094 989687 927224 532987 2118211 2118212 196198 52174	A3 A1 A1 A A1 U B	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977
US	3743551			BE BG CA CH DE DE FI FR	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640	A3 A1 A1 A A1 U B A5	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972
US	3743551			BE BG CA CH DE DE FI FR GB	765869 19094 989687 927224 532987 2118211 2118212 196198 52174	A3 A1 A1 A A1 U B A5	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977
US	3743551			BE BG CA CH DE DE FI FR	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071	A3 A1 A1 A1 A1 U B A5 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973
US	3743551			BE BG CA CH DE DE FI FR GB IE	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006	A3 A1 A1 A1 U B A5 A B1	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976
US	3743551			BE BG CA CH DE DE FI FR GB IE IL	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603	A3 A1 A1 A1 U B A5 A B1 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974
US	3743551			BE BG CA CH DE DE FI FR GB IL LU	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002	A3 A1 A1 A1 U B A5 A B1 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971
US	3743551			BE BG CA CH DE DE FR GB IL LU NO	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203	A3 A1 A1 A1 U B A5 A B1 A A1 B	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976
US	3743551			BE BG CA CH DE FI FR GB IL NO PL	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264	A3 A1 A1 A1 A1 U B A5 A B1 A1 B1 B1	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976 31-12-1975
US	3743551			BE BG CA CH DE FI FR GB IL NO PL RO	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264 61556	A3 A1 A1 A1 U B A5 A B1 A A1 B B1 A1	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976 31-12-1975 15-12-1976
US	3743551			BE BG CA CH DE FI FR GB IL NO PL SU	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264 61556 513605	A3 A1 A1 A1 A1 UB A5 A B1 A1 B1 A3	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976 31-12-1975 15-12-1976 05-05-1976
US	3743551			BE BG CA CH DE FI FR BIL UO PC SU TR	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264 61556 513605 17249	A3 A1 A1 A1 B A5 A B1 A1 B1 A3 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976 31-12-1975 15-12-1976
US	3743551			BE BG CA CH DE FI FR BIL LUO PC SU TR US	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264 61556 513605	A3 A1 A1 A1 B A5 A B1 A1 B1 A3 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976 31-12-1975 15-12-1976 05-05-1976
US	3743551			BE BG CA CH DE FI FR BIL UO PC SU TR	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264 61556 513605 17249 3774703	A3 A1 A1 A1 B A5 A B1 A1 A3 A	30-04-1975 25-05-1976 29-05-1973 31-01-1973 28-10-1971 28-10-1971 16-03-1980 31-03-1977 07-01-1972 25-12-1973 21-07-1976 14-03-1974 26-08-1971 22-11-1976 31-12-1975 15-12-1976 05-05-1976 03-08-1976
US	3743551			BE BG CA CH DE FI FR BIL LUO PC SU TR US	765869 19094 989687 927224 532987 2118211 2118212 196198 52174 2089640 1342071 36006 36603 63002 135203 83264 61556 513605 17249	A3 A1 A1 A1 B A5 A B1 A3 A A A	30-04-197 25-05-197 29-05-197 31-01-197 28-10-197 28-10-197 16-03-198 31-03-197 07-01-197 25-12-197 21-07-197 14-03-197 22-11-197 31-12-197 15-12-197 05-05-197 03-08-197 27-11-197